

## TALC AND PYROPHYLLITE<sup>1</sup>

(Data in thousand metric tons unless otherwise noted)

**Domestic Production and Use:** Domestic talc production in 2014 was estimated to be 535,000 tons valued at \$21 million. Four companies operated six talc-producing mines in four States in 2014. The top three companies accounted for more than 99% of the U.S. talc production. One company in California shipped from stocks. Montana was the leading producer State, followed by Texas, Vermont, and Virginia. Sales of talc were estimated to be 554,000 tons valued at \$90 million. Talc produced and sold in the United States was used for ceramics, 26%; paper, 21%; paint, 19%; roofing, 9%; plastics, 8%; rubber, 4%; cosmetics, 3%; and other, 10%. About 260,000 tons of talc was imported; more than 75% of the imported talc was used in cosmetics, paint, and plastic markets. The end use ranking in the United States, when including imported talc and in decreasing order by tonnage, was plastics, ceramics, paint, paper, roofing, cosmetics, rubber, and other. One company in North Carolina mined pyrophyllite. Production of pyrophyllite increased from that of 2013 and consumption was, in decreasing order by tonnage, in refractory products, ceramics, and paint.

<b>Salient Statistics—United States:</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014<sup>e</sup></b>
Production, mine	604	616	515	542	535
Sold by producers	567	567	575	560	554
Imports for consumption	242	285	350	269	260
Exports	240	223	270	189	190
Shipments from Government stockpile excesses	—	—	—	—	—
Consumption, apparent	606	678	595	622	605
Price, average, processed, dollars per metric ton	150	155	152	163	163
Employment, mine and mill	280	290	310	280	250
Net import reliance <sup>2</sup> as a percentage of apparent consumption	1	9	13	13	12

**Recycling:** Insignificant.

**Import Sources (2010–13):** China, 30%; Canada, 29%; Pakistan, 23%; and other, 18%.

<b>Tariff: Item</b>	<b>Number</b>	<b>Normal Trade Relations 12–31–14</b>
Not crushed, not powdered	2526.10.0000	Free.
Crushed or powdered	2526.20.0000	Free.
Cut or sawed	6815.99.2000	Free.

**Depletion Allowance:** Block steatite talc: 22% (Domestic), 14% (Foreign). Other: 14% (Domestic and foreign).

### **Government Stockpile:**

#### **Stockpile Status—9–30–14<sup>3</sup> (Metric tons)**

<b>Material</b>	<b>Inventory</b>	<b>Disposal Plan FY 2014</b>	<b>Disposals FY 2014</b>
Talc, block and lump	480	<sup>4</sup> 907	<sup>4</sup> 876
Talc, ground	132	—	—

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**Events, Trends, and Issues:** Since 1994, talc production and apparent consumption decreased by 44% and 34%, respectively. The decline can be attributed to many factors. Ceramic tile and sanitaryware formulations and the technology for firing ceramic tile changed during that time, reducing the amount of talc required for the manufacture of some ceramic products. Also, because ceramic tile imports increased, many domestic ceramic-tile manufacturing plants were closed, and a major domestic talc supplier to the ceramic tile industry ceased operations in 2009. For paint, the industry shifted more of its production to water-based paint from oil-based paint to reduce volatile emissions. That reduced the use of talc, which repels water. For cosmetics, manufacturers of body dusting powders shifted some of their production from talc-based to corn starch-based products. Paper manufacturing decreased from the 1990s and use of chemical pitch control agents increased, reducing the demand for talc for pitch control. Other markets remained relatively constant during the 20-year period. Talc use in plastics, particularly automotive plastic components, increased, but a significant share of the increase in demand appears to have been met through the use of imported talc.

Domestic talc production and sales decreased slightly in 2014. U.S. exports increased slightly from those of 2013, with Canada and Mexico receiving more than 70% of U.S. talc exports. U.S. imports decreased slightly from those of 2013. In 2014, Canada and China remained the lead suppliers of talc to the United States, accounting for 37% and 40% of U.S. talc imports, respectively.

The Board of Governors of the Federal Reserve System reported a 5.6% increase in manufacturing of durable goods, including an 8.1% growth in automobile and truck manufacture and a 7.7% growth in plastics and rubber components from August 2013 to August 2014. The U.S. Census Bureau reported that housing starts increased by 8% between August 2013 and August 2014. These trends could lead to increased consumption of talc, if they are sustained, because talc is used in manufacturing catalytic converter bodies (ceramics), automotive and truck body and underhood components (plastics), paint and coatings (fillers and extenders), and plastics and rubber (fillers and extenders in plastic products, tires, and other rubber components). Talc is used to manufacture such construction products as adhesives, caulks, ceramics, joint compounds, paint, and roofing.

Sales of pyrophyllite increased in 2014. Sales to industries that use pyrophyllite to manufacture ceramics and paints increased slightly in 2014 owing to the continued recovery of those sectors of the economy.

### **World Mine Production and Reserves:**

	Mine production		Reserves <sup>5</sup>
	2013	2014 <sup>e</sup>	
United States	542	535	140,000
Brazil <sup>6</sup>	550	500	45,000
China	2,200	2,200	Large
Finland	440	360	Large
France	420	420	Large
India <sup>6</sup>	663	660	75,000
Japan <sup>6</sup>	376	380	100,000
Korea, Republic of <sup>6</sup>	520	540	11,000
Other countries <sup>6</sup>	1,190	1,350	Large
World total (rounded) <sup>6</sup>	6,900	6,950	Large

**World Resources:** The United States is self-sufficient in most grades of talc and related minerals. Domestic and world resources are estimated to be approximately five times the quantity of reserves.

**Substitutes:** Substitutes for talc include bentonite, chlorite, kaolin, and pyrophyllite in ceramics; chlorite, kaolin, and mica in paint; calcium carbonate and kaolin in paper; bentonite, kaolin, mica, and wollastonite in plastics; and kaolin and mica in rubber.

<sup>e</sup>Estimated. — Zero.

<sup>1</sup>Excludes pyrophyllite, unless noted.

<sup>2</sup>Defined as imports – exports + adjustments for Government stock changes.

<sup>3</sup>See [Appendix B](#) for definitions.

<sup>4</sup>Included talc, block and lump, and talc, ground.

<sup>5</sup>See [Appendix C](#) for resource/reserve definitions and information concerning data sources.

<sup>6</sup>Includes pyrophyllite.